INCH POUND

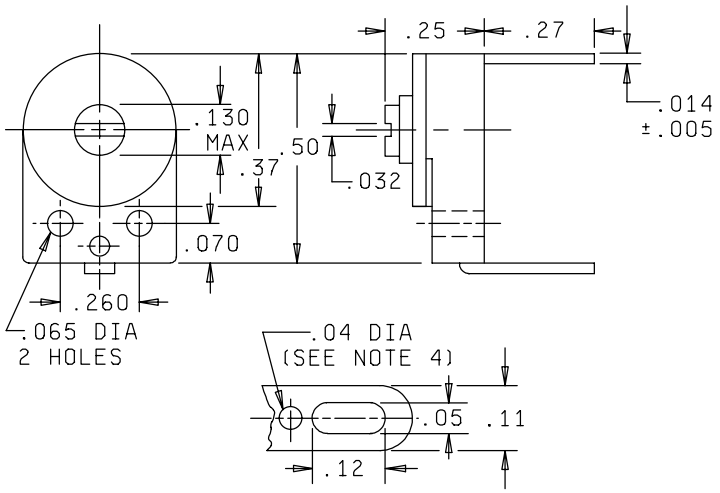
MIL-PRF-81/5C
25 May 1999
SUPERSEDING
MIL-C-81/5B
27 December 1989

PERFORMANCE SPECIFICATION SHEET

CAPACITORS, VARIABLE, CERAMIC DIELECTRIC,
STYLE CV34

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification and MIL-PRF-81.



Inches	mm	Inches	mm
.005	0.13	.120	3.05
.014	0.35	.130	3.30
.032	0.81	.250	6.35
.040	1.02	.260	6.60
.050	1.27	.270	6.86
.065	1.65	.370	9.40
.070	1.78	.500	12.70
.110	2.79		

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ±.02 (0.51 mm) for two place decimals and ±.010 (0.25 mm) for three place decimals.
4. This hole is optional.

FIGURE 1. Dimensions and configurations.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Capacitance value: See table I.

DC rated voltage: See table I.

Operating temperature and storage range: -55°C to +125°C.

Characteristics: See table I.

Dielectric withstanding voltage: Method 301 of MIL-STD-202. A dc potential of 2.2 times rated voltage applied between terminals for 3 seconds ±2 seconds.

Barometric pressure: Method 105 of MIL-STD-202, condition D (100,000 feet).

Test potential: 100 percent of dc rated voltage.

Insulation resistance: Method 302 of MIL-STD-202, condition A, 100 V dc applied, 10,000 megohms, minimum.

Capacitance: Method 305 of MIL-STD-202.

DF: At 1 MHz ±100 kHz, at maximum and minimum capacitance, shall be not more than 0.2 percent.

TABLE I. Style CV34.

Type designation	Capacitance (pF)		DC rated voltage (volts)	Characteristics				
				Symbol	Capacitance change from value at 25°C			
					At -55°C		At +85°C	
	Minimum	Maximum			Minimum percent	Maximum Percent	Minimum percent	Maximum percent
CV34A080	1.5	8.0	350	A	-4.5	+2.0	-2.5	+2.0
CV34A150	4.0	15.0	350	A	-4.5	+2.0	-2.5	+2.0
CV34D200	4.0	20.0	200	D	+1.5	+7.0	-5.0	-1.5
CV34D350	8.0	35.0	200	D	+1.5	+7.0	-5.0	-1.5
CV34E600	15.0	60.0	500	E	+3.0	+14.0	-10.0	-3.0

Temperature coefficient: Within the limits specified for the applicable characteristics.

Capacitance drift: Within 0.75 percent of initial step 1 measurement or 0.50 (picofarad) pF, whichever is greater.

Terminal strength:

Pull test: Capacitor held by body and 4-pound load applied to each terminal for at least 10 seconds.

Torque: Not less than 1 ounce-inch nor more than 6 ounce-inches.

Fatigue:

ΔC: Shall not exceed 12 percent or 0.75 pF, whichever is greater.

Torque: Not less than 1 ounce-inch nor more than 10 ounce-inches.

Life:

Qualification test: 1,000 hours at +85°C, 150 percent or rated volts dc with a peak alternating voltage of 50 percent of rated volts dc (100 hertz or less) superimposed.

Insulation resistance: Initial requirement.

Capacitance change: Shall not exceed ±8 percent of initial value or 0.5 pF, whichever is greater.

Group C life: Conditions and requirements are the same as that required for qualification.

Shock (specified pulse): Method 213 of MIL-STD-202, condition I (100 g's).

Vibration: Method 204 of MIL-STD-202, condition B (15 g's).

Capacitance change: Shall not exceed ±2 percent or 0.5 pF, whichever is greater.

DF: Shall be not more than 0.2 percent.

Dielectric withstanding voltage: 1,100 V dc, applied for 3 seconds ±2 seconds.

Insulation resistance: 10,000 megohms, minimum.

Moisture resistance: Method 106 of MIL-STD-202:

Insulation resistance: 10,000 megohms, minimum.

Capacitance change: Shall not exceed ±5 percent of nominal value or 0.5 pF, whichever is greater.

DF: Shall be not more than 0.5 percent.

Qualification inspection is not required.

Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:
Army - CR
Navy - EC
Air Force - 11
DLA - CC

Review activity:
Air Force - 19

Preparing activity:
DLA - CC

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